



PATENT  
Docket No. 20-4348P

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8.11.98

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicants: WATANABE et al.  
Serial No.: 08/992,914 Group: 1649  
Filed: December 18, 1997 Examiner: O. Zaghmout  
For: RAFFINOSE SYNTHASE GENES AND THEIR USE

**RESPONSE TO RESTRICTION REQUIREMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

August 3, 1998  
(Monday)

Sir:

In response to the Restriction Requirement issued July 1, 1998, the following remarks are respectfully submitted in connection with the above-identified application.

**REMARKS**

The Examiner has divided the present application into seven groups of claims as follows:

I. Claims 1-19, 29-36 are drawn to nucleic acid molecule encoding a full length of the gene of a raffinose synthase, vectors containing it in [the] sense orientation, methods for their use to transform plants, and the resultant plants;

II. Claim 20 is drawn to a raffinose synthase protein;

III. Claims 21-23 are drawn to a gene fragment comprising less than [a] full length raffinose synthase gene;

IV. Claims 24-25, 28 are drawn to a method for the detection of a full length

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[gene] or fragment by hybridization;

V. Claims 26-27 are drawn to a method for the detection of a full length [gene] or fragment by amplification by polymerase Chain Reaction (PCR);

VI. Claim 37 is drawn to a method for the production of a raffinose synthase protein;

VII. Claims 38-39 are drawn to antibody to a raffinose synthase protein.

Applicants point out to the Examiner that claim 19 is drawn to a purified protein and is therefore properly included in the claims of Group II rather than Group I.

Applicants hereby elect prosecution of the claims of group I, claims 1-18 and 29-36, with traverse.

Applicants submit that at least groups I, III, IV and V should be examined together in the present application. The Examiner indicates that the claims of group III, claims 21-23, directed to a portion of the gene of the claims of group I, "involves less than the full length raffinose gene, not required by any other group." Applicants submit that the Examiner fails to carry his burden of showing that the restricted claims constitute an "independent and distinct" invention. 35 U.S.C. § 121. It is not enough that the invention merely be distinct. A fragment of a gene, though distinct, cannot be considered an invention independent of the full length gene.

Furthermore, an embodiment that is "less than" its principal embodiment cannot be said to be more burdensome to search than the principal embodiment. As the Examiner fails to establish this additional search burden, the claims of group III should be rejoined with the claims of group I. M.P.E.P. § 803.

The claims of groups IV and V constitute a process for using the raffinose synthase gene of the invention by hybridization and PCR, respectively. The Examiner indicates that hybridization (or PCR) is "not required by any other group." But, this is not the relevant standard for restriction of a product from a process for its use. Rather, the Examiner must show either or both of that (1) the process as claimed can be performed using a materially different product or (2) the product as claimed can be used in a materially different process. The Examiner has demonstrated neither of these.

Clearly the claimed process cannot be performed using a materially different product. The issue is thus whether or not hybridization and PCR (the detection methods recited in the claims of groups IV and V) constitute "materially different" processes. As hybridization of a primer that constitutes a portion of the raffinose synthase gene is the first step in the PCR process, Applicants submit that PCR and hybridization do not constitute materially different processes. Accordingly, the claims of groups IV and V should be rejoined for prosecution in

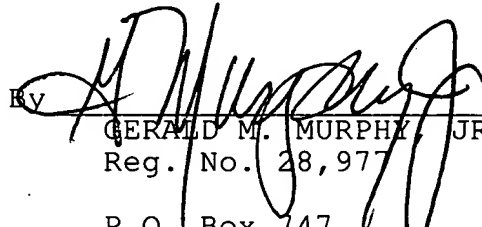
the present application.

For all of the above reasons, Applicants submit that the claims of groups I, and III-V should be rejoined for prosecution of in the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. \$1.16 or under 37 C.F.R. \$1.17; particularly, extension of time fees.

Respectfully submitted,

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LARGE ENTITY TRANSMITTAL FORM

Assistant Commissioner for Patents  
Washington, D.C. 20231

August 3, 1998  
(Monday)

Sir:

Transmitted herewith is a Response to Restriction/Election Requirement in the above-identified application.

— The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

— Petition for \_\_\_\_\_ month(s) extension of time pursuant to 37 CFR §§ 1.17 and 1.136(a). \$\_\_\_\_\_ for the extension of time.

X No fee is required.

— A check in the amount of \$\_\_\_\_\_ is enclosed.

— Please charge Deposit Account No. 02-2448 in the amount of \$\_\_\_\_\_. A triplicate copy of this sheet is attached.

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Serial No. 08/992,914

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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